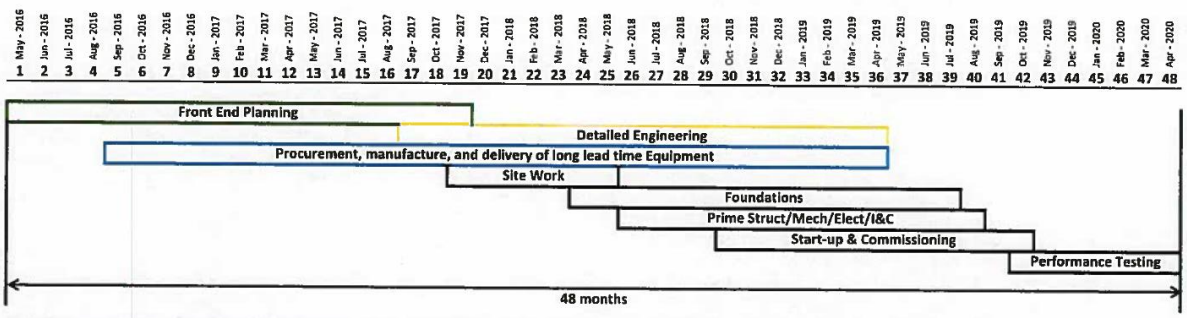
**Site A – Over 3 GW of Capacity**

- The owner first began making plans to close its ash ponds in September 2015. Extensive conceptual design began in 2016 to address scenarios when the existing surface impoundment would not be available.
- Projects to allow fly ash and bottom ash to be handled dry are scheduled to be completed by April 2019. After April 17, 2019, CCR waste streams including ash transport water for fly ash and bottom ash will no longer go to the surface impoundment.
- It is not reasonably or physically possible to cease sending non-CCR wastewater streams to the existing surface impoundment by April 17, 2019. Specifically, the infrastructure and equipment necessary to move these waste streams off the existing surface impoundment are still under construction and not yet installed and operational.
- Anticipated project schedule for non-CCR wastewater streams:
    - According to the current water balance, non-CCR wastewater streams from numerous individual plant processes are routed to the surface impoundment (coal pile runoff, low volume wastewater, equipment washdown, and auxiliary cooling water). Some waste streams, including coal pile runoff, require treatment even if the plan is not operating due to the accumulation of storm water.
    - Substantial construction efforts at the plant are required to route the waste streams to the new wastewater treatment facility.
    - Project duration is lengthy due to the extensive equipment installation and construction scope. When efforts are properly stacked and staggered consistent with accepted engineering and project management practice, the overall duration of the project until completion is expected to be approximately 48 months. A summary schedule is shown as Attachment 1.
    - The water treatment process equipment alone requires several years to procure, fabricate, deliver, install, test and begin operations at plant site.
    - The complexity of the wastewater treatment redesign is significant given the number of waste streams to re-route, its baseload operation (and scheduled outages), and the nature of several of the non-CCR waste streams (some flow intermittently).
    - The new treatment system is designed to treat up to 6,500 gallons per minute with a large variability in solids loading, primarily due to storm events.
    - The technology selected to treat non-CCR wastewater will utilize clarifiers, settling tanks, and associated equipment to remove suspended solids from the incoming water. Coagulant, polymer and pH adjustment chemicals will be added as needed to assure National Pollutant Discharge Elimination System (“NPDES”) permit discharge limits are met and instream water quality is protected.
- Other considerations:
    - Factors beyond the reasonable control of the owner/operator that may cause construction delays or disruptions impacting the final in-service date include, but are not limited to:
        - Supply and demand market forces
        - Equipment, commodity and labor availability
        - Weather
    - The owner/operator evaluated temporary alternatives to remove non-CCR wastewater streams from going to the impoundment for treatment by April 2019 and could not identify

a feasible non-CCR temporary wastewater treatment system that could be reliably operational by April 2019.

- The specific equipment needed on this scale is not readily available and much of it would have to be fabricated with long lead times.
- Additionally, a temporary system would be less reliable, extremely costly and only in place for a limited time before the permanent system is ready to start and reliably operate.

**ATTACHMENT 1**




Note:
- The construction schedule is contingent upon supply and demand market forces, equipment, commodity and labor availability, and weather. These factors, among others, may cause construction delays or disruptions that could ultimately impact the final in-service date of the treatment system.
- The current summary schedule above is based on milestones from the Project Schedule.

**Site B – Plant Site Retired Coal in Early 2016**

- The plant site no longer burns coal as of March 2016. Accordingly, the only surface impoundment on site now only receives non-CCR wastewater.
- The surface impoundment closure plan includes building a new lined wastewater pond to handle non-CCR wastewater that currently flows to the surface impoundment.
- The new non-CCR wastewater pond is currently under construction. The existing surface impoundment is being reconfigured to provide temporary storage of the wastewater, including providing enough retention time to replicate the retention time of the existing impoundment. At the same time, materials (liners, etc) are being purchased, fabricated and shipped (some materials have already been purchased and fabricated). The first material shipments, however, have been delayed due to impacts from Hurricane Florence.
- Overall non-CCR wastewater management project schedule summary:
    - Pre-permit planning and CCR compliance strategy began in November 2015.
    - The new wastewater pond has been incorporated into the current NPDES permit. From initial pre-application discussions through final permitting, the NPDES permitting process for this facility took approximately 16 months.
    - Conceptual design for the new non-CCR wastewater pond took approximately 7 months.
    - Detailed design took approximately an additional 15 months.
- The construction schedule anticipates that the new non-CCR wastewater pond will be constructed and ready to receive wastewater by October of 2020.
    - Issuance of the RFP and contractor selection took approximately 3-4 months.
    - Initial construction and product delivery schedules anticipated that the non-CCR wastewater pond would begin receiving wastes in mid-to-late summer of 2020.
    - Approximately one month is anticipated for testing and startup.
    - Recent wet weather and significant storms above the 100-year storm in the area have delayed the construction schedule significantly.
    - At this time, it is anticipated that the new pond will begin accepting non-CCR wastewater in early fall of 2020.

Other considerations:

- The plant is located in an area where hurricanes are commonplace. Significant delays have been experienced in completing the non-CCR wastewater pond, including delays in obtaining materials and equipment, such as dump trucks to haul structural fill on-site. The impact of future weather events is difficult to predict.
- Any significant changes to the permit to incorporate a design change would add months or more to the schedule.

**Site C – HDPE-Lined Impoundment Receives Bottom Ash and Non-CCR Waste Streams Only**

- The facility currently handles fly ash dry and stores the fly ash in on-site permitted landfills.
- The facility sends bottom ash and non-CCR waste streams to an on-site impoundment that is lined with HDPE and underlying clay. The liner, however, does not fully meet the Federal CCR rule requirements to be considered a lined impoundment.
- Current wastewater streams entering the ash pond:
    - Wastewater Basin (wash down, boiler blowdown, building sumps),
    - Chemical metal cleaning waste (included in above)
    - Landfill Leachate
    - Coal Pile Runoff Pond
    - Bottom Ash Sluice (with coal rejects).
    - The impoundment also receives waste streams associated with gas combined cycles located at the facility.
- These projects associated with bottom ash and non-CCR wastewater are closely integrated. Estimated combined project timeline:
    - Design: 10 months
    - NPDES Permitting: 18 months
    - Obtaining vendors/equipment/contractors: approximately 10 months (concurrent with permitting)
    - Construction timeframe: 8 months (concurrent with permitting)
    - System testing: 1 month
    - Overall duration: 29 months from present
        - 29 months = April 30, 2021